

Dr. Martin G. Mlynczak
Formal Publications in Archival Literature

Google Scholar Link: http://scholar.google.com/citations?user=5C6_Ih4AAAAJ

Times cited: 9510: h-index: 51. As of 03/25/2020

Handbooks

Tansock, J., D. Bancroft, J. Butler, C. Cao, R. Datla, S. Hansen, D. Helder, R. Kacker, H. Latvakoski, M. Mlynczak, T. Murdock, J. Peterson, D. Pollock, R. Russell, D. Scott, J. Seamons, T. Stone, A. Thurgood, R. Williams, X. Xiong, and H. Yoon (2015), Guidelines for Radiometric Calibration of Electro-Optical Remote Sensing Instruments for Remote Sensing, NIST HB 157, <http://dx.doi.org/10.6028/NIST.HB.157>

Book Chapters

Mlynczak, M. G., and L. Hunt, (2013), Atomic species in the mesopause region, *Encyclopedia of Atmospheric Sciences, 2nd Edition*, 2014.

M. Weber, J. Pagaran, S. Dikty, C. von Savigny, J. P. Burrows, M. DeLand, L. E. Floyd, G. W. Harder, M. G. Mlynczak, H. Schmidt, (2013), Investigation of solar irradiance variations and its impact on middle atmosphere ozone, *Climate and Weather of the Sun-Earth System (CAWSSES)*, Springer Atmospheric Sciences, 39-54, DOI: 10.1007/978-94-007-4348-9_3.

Anne K. Smith, Daniel R. Marsh, Martin G. Mlynczak, James M. Russell, and Jeffrey C. Mast, SABER Observations of Daytime Atomic Oxygen and Ozone Variability in the Mesosphere, *Aeronomy of the Earth's Atmosphere and Ionosphere, IAGA Special Sopron Book Series*, 2011, Volume 2, Part 1, 75-82, DOI: 10.1007/978-94-007-0326-1_5

Peer-Reviewed Journal Articles

2021

- F242 Ern, M. M. Diallo, P. Preusse, M. G. Mlynczak, J. M. Russell III, M. J. Schwartz, Q. Wu, and M. Riese (2021). The semiannual oscillation (SAO) in the tropical middle atmosphere and its gravity wave driving in reanalyses and satellite observations, *Atmos. Chem. Phys.*, submitted.
- F241 Grandin, M., et al., (2021). Investigation of a large-scale dune aurora event by combining Citizen Scientists' pictures with spacecraft observations, *AGU Advances*, submitted.
- F240 Mlynczak, M. G., et al., (2021). Radiative transfer in the 5.3 μm band of thermospheric nitric oxide, *J. Quant. Spectrosc. Rad. Transfer*, submitted.

- F239 S. Mondal, M. Sivakandan, S. Sarkhel, M. V. Sunil Krishna, Martin G. Mlynczak, James M. Russell III, G. Bharti (2021). A case study of a thermally ducted undular mesospheric bore accompanied by ripples over the western Himalayan region, *Adv. Space Res. Revised.*

2020

- F238 Emmert, J. T., et al., (2020). NRLMSIS 2.0 – A whole atmosphere empirical model of temperature and neutral species densities, *J. Geophys. Res. – Space Physics*, <https://doi.org/10.1029/2020EA001321>
- F237 Jones, M., et al., (2020). Coupling from the middle atmosphere to the exobase: Dynamical disturbance effects on light chemical species, *J. Geophys. Res. – Space Physics*, <https://doi.org/10.1029/2020JA028331>.
- F236 Feldman, D. R., W. D. Collins, C. Kuo, N. H. Nguyen, Y. L. Shea, M. G. Mlynczak, and B. A. Wielicki, (2020). Ambiguity, and the lack thereof, in broadband albedo and its changes in the 21st century, *J. Geophys. Res.-Atmospheres*, submitted.
- F235 Palchetti, L., et al., (2020). FORUM: FORUM: unique far-infrared satellite observations to better understand how Earth radiates energy to space, *Bull. Am. Meteor. Soc.*, <https://doi.org/10.1175/BAMS-D-19-0322.1>.
- F234 Saito, M., P. Yang, X. Huang, H. Brindley, and M. G. Mlynczak (2020). Spaceborne far-infrared observations improving nighttime ice cloud property retrievals, *Geophys. Res. Lett.*, <https://doi.org/10.1029/2020GL087491>.
- F233 Malhotra, G., Ridley, A. J., Marsh, D. R., Wu, C., Paxton, L. J., & Mlynczak, M. G. (2020). Impacts of lower thermospheric atomic oxygen on thermospheric dynamics and composition using the global ionosphere thermosphere model. *Journal of Geophysical Research: Space Physics*, 125, e2020JA027877. <https://doi.org/10.1029/2020JA027877>.
- F232 Wust, S., M. Bittner, J.-H. Yee, M. G. Mlynczak, and J. M. Russell, (2020). Variability of the Brunt-Vaisala frequency at OH*-layer height at low mid-latitudes, *Atmos. Meas. Tech.*, 13, <https://doi.org/10.5194/amt-13-6067-2020>.
- F231 Mlynczak, M. G., et al., (2020). Radiometric stability of the SABER instrument. *Earth and Space Science*, <https://doi.org/10.1029/2019EA001011>.
- F230 Salinas, J. C., et al., (2020). Local-time variabilities of SABER CO₂ in the mesosphere and lower thermosphere region. *Journal of Geophysical Research-Space Physics*, *Journal of Geophysical Research:Space Physics*, 125, e2019JA027039. <https://doi.org/10.1029/2019JA027039>

2019

- F229 Weimer, D. R., J. T. Emmert, D. Drob, P. M. Mehta, and W. K. Tobiska, E. Doornbos, M. G. Mlynczak, and L. A. Hunt (2019). Improving neutral density predictions using exospheric temperatures calculated on a geodesic, polyhedral grid. *Space Weather*, 18, e2019SW002355. <https://doi.org/10.1029/2019SW002355>
- F228 Nischal, N., Oberheide, J., Mlynczak, M. G., Marsh, D. R., & Gan, Q. (2019). Solar cycle variability of nonmigrating tides in the 5.3 and 15 μm infrared cooling of the thermosphere (100–150 km) from SABER. *Journal of Geophysical Research: Space Physics*, 124, 2338– 2356. <https://doi.org/10.1029/2018JA026356>
- F227 Yue, J., Russell, J., Gan, Q., Wang, T., Rong, P., Garcia, R., & Mlynczak, M. (2019). Increasing Water Vapor in the Stratosphere and Mesosphere After 2002. *Geophysical Research Letters*, 46. <https://doi.org/10.1029/2019GL084973>
- F226 Lu, X., Wu, H., Chu, X., Oberheide, J., Mlynczak, M. G., & Russell, J. M. (2019). Quasi-biennial oscillation of short-period planetary waves and polar night jet in winter Antarctica observed in SABER and MERRA-2 and mechanism study with a quasi-geostrophic model. *Geophysical Research Letters*, 46. <https://doi.org/10.1029/2019GL084759>
- F225 Mondal, S., Sarkhel, S., Agarwal, J., Chakrabarty, D., Sekar, R., Yuan, T., et al. (2019). On the long lasting “C-type” structures in the sodium lidargram: The lifetime of Kelvin-Helmholtz billows in the mesosphere and lower thermosphere region. *Journal of Geophysical Research: Space Physics*, 124, 3110– 3124. <https://doi.org/10.1029/2019JA026630>
- F224 Mlawer, E. J., Turner, D. D., Paine, S. N., Palchetti, L., Bianchini, G., Payne, V. H., et al. (2019). Analysis of water vapor absorption in the far-infrared and submillimeter regions using surface radiometric measurements from extremely dry locations. *Journal of Geophysical Research: Atmospheres*, 124, 8134– 8160. <https://doi.org/10.1029/2018JD029508>
- F223 Lednyts'kyy, O., C. von Savigny, Miriam Sinnhuber, N. Iwagami, M. Mlynczak (2019). Multiple airglow chemistry approach for atomic oxygen retrievals on the basis of in-situ nightglow emissions, *J. Atmos. Sol. Terr. Phys.*, 194, <https://doi.org/10.1016/j.jastp.2019.105096>.
- F222 Rong, P. P., J. M. Russell, B. T. Marshall, L. L. Gordley, M. G. Mlynczak, and K. A. Walker (2019). Validation of water vapor measured by SABER on the TIMED satellite, *J. Atmos. Sol. Terr. Phys.*, <https://doi.org/10.1016/j.jastp.2019.105099>.
- F221 Yue, J., Jian, Y., Wang, W., Meier, R. R., Burns, A., Qian, L., et al. (2019). Annual and semiannual oscillations of thermospheric composition in TIMED/GUVI limb measurements. *Journal of Geophysical Research: Space Physics*, 124, 3067– 3082. <https://doi.org/10.1029/2019JA026544>

- F220 Fytterer, T., C. von Savigny, M. G. Mlynczak, and M. Sinnhuber, (2019). Model results of OH airglow considering four different wavelength regions to derive night-time atomic oxygen and atomic hydrogen in the mesopause region, *Atmos. Chem. Phys.*, <https://www.atmos-chem-phys.net/19/1835/2019/>
- F219 Airapetian, V. S., et al., (2019). Impact of space weather on climate and habitability of terrestrial-type exoplanets. *International Journal of Astrobiology*, 1-59, DOI: <https://doi.org/10.1017/S1473550419000132>.
- F218 Cooke, R. M., A. Golub, B. Wielicki, M. Mlynczak, D. Young, and R. Baize (2019). Monetizing the value of measurements of equilibrium climate sensitivity using the social cost of carbon. *Environmental Modeling and Assessment*, <https://doi.org/10.1007/s10666-019-09662-0>.
- F217 Wust, S. et al., (2019). Observations of OH-airglow from ground, aircraft, and satellite: investigation of wave-like structures before a minor stratospheric warming, *J. Atm. Sol-Terr. Phys.*, <https://doi.org/10.5194/acp-19-6401-2019>.
- F216 Siskind, D. et al., (2019). On the relative roles of dynamics and chemistry governing the abundance and diurnal variation of low latitude thermospheric nitric oxide, *Ann. Geophys.*, <https://doi.org/10.5194/angeo-37-37-2019>.
- 2018**
- F215 Mlynczak, M. G., Hunt, L. A., Marshall, B. T., & Russell, J. M., III (2018). Infrared radiation in the thermosphere near the end of solar cycle 24. *Geophysical Research Letters*, 45. <https://doi.org/10.1029/2018GL080389>.
- F214 Rezac, L., Yue, J., Yongxiao, J., Russell, J. M. III, Garcia, R., Lopez-Puertas, M., and Mlynczak, M. G. (2018). On long-term SABER CO₂ trends and effects due to nonuniform space and time sampling. *Journal of Geophysical Research: Space Physics*, 123. <https://doi.org/10.1029/2018JA025892>.
- F213 Salinas, C. C. J., L. C. Chang, M. C. Liang, L. Qian, J. Yue, J. Lee, J. M. Russell, M. G. Mlynczak, and D. L. Wu, Solar cycle response of CO₂ over the austral winter mesosphere and lower thermosphere region, (2018), *J. Geophys. Res.-Space Phys.*, <https://doi.org/10.1029/2018JA025575>.
- F212 Siskind, D. E., A. W. Merkel, D. R. Marsh, C. E. Randall, M. E. Hervig, M. G. Mlynczak, and J. M. Russell III, Understanding the effects of Polar Mesospheric Clouds on the environment of the upper mesosphere and lower thermosphere, (2018), *J. Geophys. Res.*, DOI: [10.1029/2018JD028830](https://doi.org/10.1029/2018JD028830)
- F211 Flynn, S., D. J. Knipp, T. Matsuo, M. G. Mlynczak, and L. A. Hunt, Understanding the global variability of thermospheric nitric oxide flux using empirical orthogonal functions (2018), *J. Geophys. Res. – Space Physics*, <https://doi.org/10.1029/2018JA025353>

- F210 Mlynczak, M. G., L. A. Hunt, J. Russell, and B. T. Marshall (2018), Thermosphere Climate Indexes: Percentile Ranges and Adjectival Descriptors, *J. Atm. Solar-Terr. Phys.*, <https://doi.org/10.1016/j.jastp.2018.04.004>.
- F209 Weimer, D. R., M. G. Mlynczak, E. Doornbos, E. K. Sutton, L. A. Hunt, (2018), Correlations between the thermospheric semi-annual density variations and infrared emissions measured with the SABER instrument, *J. Geophys. Res.-Space Physics*, <https://doi.org/10.1029/2018JA025668>.
- F208 Mlynczak, M. G., L. A. Hunt, J. M. Russell, and B. T. Marshall, (2018), Updated SABER Night Atomic Oxygen and Implications for SABER Ozone and Atomic Hydrogen, *Geophys. Res. Lett.*, <https://doi.org/10.1029/2018GL077377>.
- F207 Mlynczak, M. G., D. J. Knipp, L. A. Hunt, J. A. Gaebler, T. Matsuo, L. Kilcommons, and C. L. Young, (2018), Space-Based Sentinels for Measurement of Infrared Cooling in the Thermosphere for Space Weather Nowcasting and Forecasting, *Space Weather*, <https://doi.org/10.1002/2017SW001757>.
- F206 Qian, L., Burns, A. G., Solomon, S. S., Smith, A. K., McInerney, J., Hunt, L., Marsh, D., Liu, H., Mlynczak, M. and Vitt, F. (2018). Temporal Variability of Atomic Hydrogen From the Mesopause to the Upper Thermosphere. *Journal of Geophysical Research: Space Physics*, 123. <https://doi.org/10.1002/2017JA024998>

2017

- F205 Wust, S., T. Offenwanger, C. Schmidt, M. Bittner, C. Jacobi, G. Stober, J.-H. Yee, M. G. Mlynczak, and J. M. Russell III (2017), Derivation of horizontal and vertical wavelengths using a scanning OH(3-1) airglow spectrometer, *Atm. Meas. Tech. Discuss.*, <https://doi.org/10.5194/amt-2017-350>.
- F204 Smith, S. M., Stober, G., Jacobi, C., Chau, J. L., Gerding, M., Mlynczak, M. G., Umbriaco, G. (2017). Characterization of a double mesospheric bore over Europe. *Journal of Geophysical Research: Space Physics*, 122, 9738–9750. <https://doi.org/10.1002/2017JA02422>
- F203 Dawkins, E., A. Feofilov, L. Rezac, A. A. Kutepov, D. Janches, M. Mlynczak, and J. Russell (2017), Validation of SABER v2.0 operational temperature data with ground-based lidars: first results and justification of methodology, *J. Geophys. Res.*, <https://doi.org/10.1029/2018JD028742>.
- F202 Liu, X., J. Yue, J. Xu, R. R. Garcia, J. M. Russell, III, M. Mlynczak, D. L. Wu, and T. Nakamura (2017), Variations of global gravity waves derived from 14 years of SABER temperature observations, *J. Geophys. Res. Atmos.*, 122, doi:10.1002/2017JD026604.
- F201 Ern, M., Q. T. Trinh, P. Preusse, J. C. Gille, M. G. Mlynczak, J. M. Russell III, and M. Riese, (2017), GRACILE: A comprehensive climatology of gravity wave parameters

based on satellite limb soundings, *Earth Syst. Sci. Data Discuss.*,
<https://doi.org/10.5194/essd-2017-109>.

- F200 Wust, S., M. Bittner, J. -H. Yee, M. G. Mlynczak, and J. M. Russell III (2017), Variability of the Brunt-Vaisala frequency at the OH layer height, *Atmos. Meas. Tech.*, 10, 4895–4903, 2017, <https://doi.org/10.5194/amt-10-4895-2017>.
- F199 Airapetian, V., C. Jackman, M. Mlynczak, W. Danchi, and L. Hunt (2017), Beacons of Life from Exoplanets Around G and K Stars, *Nature Scientific Reports*, 7, doi:10.1038/s41598-017-14192-4.
- F198 Verkhoglyadova, O., A. Komjathy, A. J. Mannucci, M. Mlynczak, L. Hunt, B. T. Tsuratani, and L. Paxton (2017), Revisiting Ionosphere-Thermosphere Responses to Solar Wind Driving in Superstorms of November 2003 and 2004, *J. Geophys. Res.*, DOI: 10.1002/2017JA024542.
- F197 Nischal, N., J. Oberheide, M. G. Mlynczak, L. A. Hunt, and A. Maute (2017), Nonmigrating tidal impact on the CO₂ 15 μm infrared cooling of the lower thermosphere during solar minimum conditions, *J. Geophys. Res., Space Phys*, 122, doi:10.1002/2017JA024273.
- F196 Mast, J., M. G. Mlynczak, R. P. Cageao, D. P. Kratz, H. Latvakoski, D. G. Johnson, D. D. Turner, and E. J. Mlawer (2017), Measurements of Downwelling Far-Infrared Radiance During the RHUBC-II Campaign at Cerro Toco, Chile and Comparisons with Line-By-Line Radiative Transfer Calculations, *J. Quant. Spectrosc. Radiat. Transfer*, 198, 25-39, <http://dx.doi.org/10.1016/j.jqsrt.2017.04.028>.
- F195 Yamazaki, Y., H. Liu, Y. Y. Sun, Y. Miyoshi, M. J. Kosch, and M. G. Mlynczak (2017), Quasi-Biennial oscillation of the ionospheric wind dynamo, *J. Geophys. Res. Space Physics*, doi:10.1002/2016JA023684.
- F194 Knipp, D. J., Pette, Kilcommons, Isaacs, Flynn, Cruz, M. Mlynczak, and L. A. Hunt (2017), Nitric Oxide: Thermospheric nitric oxide response to shock led-storms, *Space Weather*, 15, 325-342, doi:10.1002/2016SW001567.
- F193 Liu, X., W. Wu, B. A. Wielicki, Q. Yang, S. H. Kizer, X. Huang, X. Chen, S. Kato, Y. L. Shea, and M. G. Mlynczak (2017), Spectrally dependent CLARREO infrared spectrometer calibration requirement for climate change detection. *J. Climate*, doi:10.1175/JCLI-D-16-0704.1.
- F192 Brentha, T., D. E. Siskind, S. M. Bailey, J. N. Carstens, J. M. Russell III, and M. G. Mlynczak, Oblique propagation of monsoon gravity waves during the northern hemisphere 2007 summer (2017), *J. Geophys. Res., Atmos.*, 122, 5063-5075, doi:10.1002/2016JD26008.

- F191 Panka, P., et al. Resolving the mesospheric nighttime 4.3 μm emission puzzle: Comparison of the CO₂(v₃) and OH(v) emission models, (2017), *Atmos. Chem. Phys.*, 17, 9751–9760, <https://doi.org/10.5194/acp-17-9751-2017>.
- F190 Sheng, C., G. Lu, S. C. Solomon, W. Wang, E. Doornbos, L. A. Hunt, and M. Mlynczak, (2017), Thermospheric recovery during the 5 April 2010 geomagnetic storm, *J. Geophys. Res. – Space Phys.*, 122, 4588–4599, doi:10.1002/2016JA023520.
- F189 Verkhoglyadova, O. P., X. Meng, A. J. Mannucci, M. G. Mlynczak, L. A. Hunt, and G. Lu (2017), Estimation of Ionosphere-Thermosphere Energy Budget for ICME Storms of March 2013 and 2015 with GITM and observational proxies, *Space Weather.*, 15, doi:10.1002/2017SW001650.
- 2016**
- F188 Mlynczak, M. G., L. A. Hunt, J. M. Russell III, B. T. Marshall, C. J. Mertens, R. E. Thompson (2016), The global infrared energy budget of the thermosphere from 1947 to 2016 and implications for solar variability, *Geophys. Res., Lett.*, DOI: 10.1002/2016GL070965.
- F187 Salinas, C., L. C. Chang, M. C. Liang, J. Yue, J. M. Russell III, and M. G. Mlynczak (2016), Impacts of SABER CO₂-based eddy diffusion coefficients in the lower thermosphere on the ionosphere/thermosphere. *J. Geophys. Res- Space Phys.*, doi: 10.1002/2016JA023161
- F186 Yang, Y. M., O. Verkhoglyadova, M. G. Mlynczak, A. J. Mannucci, X. Meng, R. B. Langley, and L. A. Hunt (2017), Satellite-based observations of Tsunami-Induced Mesosphere Airglow Perturbations, *Geophys. Res., Lett.*, 44, 522–532, doi:10.1002/2016GL070764.
- F185 Wust, S., C. Schmidt, M. Bittner, C. Price, I. Silber, J.-H. Yee, M. G. Mlynczak, J. M. Russell III (2016), First ground-based observations of mesopause temperatures above the Eastern-Mediterranean. Part II: OH* climatology and gravity wave activity, *J. Atmos. Terr. Phys.*, <https://doi.org/10.1016/j.jastp.2017.01.003>
- F184 Li, T., N. Calvo, J. Yue, J. M. Russell III, A. K. Smith, M. G. Mlynczak, A. Chandran, X. Dou, and A. Z. Liu (2016), Southern hemisphere summer mesopause responses to El-Nino Southern Oscillation, *J. Climate*, doi: 10.1175/JCLI-D-15-0816.1.
- F183 Verkhoglyadova, O., B. T. Tsurutani, A. J. Mannucci, M. G. Mlynczak, L. A. Hunt, L. J. Paxton, A. Komjathy (2016), Solar wind driving of ionosphere-thermosphere responses in three storms near St. Patrick's day in 2012, 2013, and 2015, *J. Geophys. Res. – Space Res.*, DOI: 10.1002/2016JA022883
- F182 Mlynczak, M. G., et al. (2016), The spectroscopic foundation of radiative forcing of climate by carbon dioxide, *Geophys. Res. Lett.*, 43, 5318–5325, doi:10.1002/2016GL068837.

- F181 Ern, M., Q. Trinh, M. Kaufmann, I. Krisch, P. Preusse, J. Ugermann, Y. Zhu, J. Gille, M. G. Mlynczak, J. M. Russell III, M. J. Schwartz, and M. Riese, (2016), Satellite observations of middle atmosphere gravity wave activity and dissipation during recent stratospheric warmings, *Atmos. Chem. Phys.*, 16, doi:10.5194/acp-16-9983-2016.
- F180 Wust, S. V. Wendt, C. Schmidt, S. Lichtenstern, M. Bittner, J.-H. Yee, M. G. Mlynczak, and J. M. Russell III (2016), Derivation of gravity wave potential energy density from NDMC measurements, *J. Atmos. Sol. Terr. Phys.*, <http://dx.doi.org/10.1016/j.jastp.2015.12.003>.
- F179 Weimer, D. R., E. K. Sutton, M. G. Mlynczak, and L. A. Hunt (2016), Intercalibration of neutral density measurements for mapping the thermosphere, *J. Geophys. Res. Space Physics*, 121, 5975–5990, doi:10.1002/2016JA022691.
- F178 Verkhoglyadova, O., X. Meng, A. J. Mannucci, B. T. Tsuratani, L. A Hunt, M. G. Mlynczak, R. Hajra, and B. A Emery, Estimation of energy budget of ionosphere-thermosphere system during two CIR-HSS events: observations and modeling (2016), *J. Space Weather Space Clim.*, 6, A 20, doi:10.1051/swsc/2016013.
- F177 Huang, F. T., H. G. Mayr, J. M. Russell, and M. G. Mlynczak (2016), Ozone and temperature decadal responses to solar variability in the mesosphere and lower thermosphere, based on measurements from SABER on TIMED, *Ann. Geophys.*, 34, 29-40, doi:10.5194/angeo-34-29-2016.
- F176 Mast, J., M. Mlynczak, D. Kratz, R. Cageao, D. Johnson, and H. Latvakoski, Measurements of Downwelling Far-Infrared Radiance During the RHUBC-II Campaign at Cerro Toco, Chile and Comparisons with Line-By-Line Radiative Transfer Calculations (2016), *J. Quant. Spectrosc. Radiat. Transf.*, <https://doi.org/10.1016/j.jqsrt.2017.04.028>.
- 2015**
- F175 Mlynczak, M. G., R. P. Cageao, J. C. Mast, D. P. Kratz, H. Latvakoski, and D. G. Johnson, Observations of downwelling far-infrared emission at Table Mountain California made by the FIRST instrument, (2016), *J. Quant. Spectrosc. Radiat. Transfer*, 170, [doi:10.1016/j.jqsrt.2015.10.017](https://doi.org/10.1016/j.jqsrt.2015.10.017).
- F174 Smith, A. K., M. López-Puertas, J. Xu, and M. G. Mlynczak (2015), The heating efficiency of the exothermic reaction H + O₃ in the mesosphere, *J. Geophys. Res. Atmos.*, 120, 12739–12747, doi:[10.1002/2015JD024061](https://doi.org/10.1002/2015JD024061).
- F173 Weimer, D., Mlynczak, M. G., and L. A. Hunt, (2015), High correlations between temperature and nitric oxide in the thermosphere, *J. Geophys. Res.*, 120, doi:10.1002/2015JA021461.

- F172 Verkhoglyadova, O., X. Meng, A. J. Mannucci, B. T. Tsuratani, L. A. Hunt, M. G. Mlynczak, R. Hajira, and B. Emery, (2015) Estimation of energy budget of ionosphere-thermosphere during two CIR-HSS events: observations and modeling, *Space Weather and Space Climate*, <https://doi.org/10.1051/swsc/2016013>.
- F171 Yue, J., J. Russell III, Y. Jian, L. Rezac, R. Garcia, M. López-Puertas, and M. G. Mlynczak (2015), Increasing carbon dioxide concentration in the upper atmosphere observed by SABER, *Geophys. Res. Lett.*, 42, 7194–7199, doi:[10.1002/2015GL064696](https://doi.org/10.1002/2015GL064696).
- F170 Sarkhel, S., et al., (2015), A case study on occurrence of an unusual structure in the sodium layer over Gdanki, India, *Earth, Planets and Space*, 67:19, doi:10.1186/s40623-015-0183-5.
- F169 Cooke, R., A. Golub, B. A. Wielicki, D. F. Young, and M. G. Mlynczak, (2016), Using the Social Cost of Carbon to Value Earth Observing Systems, *Climate Policy*, DOI: 10.1080/14693062.2015.1110109.
- F168 Mlynczak, M. G., et al., (2015), A joint solar and geomagnetic activity index for thermospheric climate, *Geophys. Res. Lett.*, 42, doi:[10.1002/2015GL064038](https://doi.org/10.1002/2015GL064038).
- F167 Lednyts'kyy, C. von Savigny, K. U. Eichmann, and M. G. Mlynczak (2015), Atomic oxygen retrievals in the MLT region from SCIAMACHY nightglow limb measurements, *Atm. Meas. Tech.*, 8, 1021-1041. doi: 10.5194/amt-8-1021-2015.
- F166 Fytterer, T., M. G. Mlynczak, H. Neider, M. Sinnhuber, G. Stiller, and J. Urban, (2015), Energetic particle induced inter-annual variability of ozone inside the Antarctic polar vortex observed in satellite data, *Atmos. Chem. Phys.*, 15, 3327-3338. Doi: 10.5194/acp-15-3327-2015.

2014

- F165 Siskind, D. E., M. G. Mlynczak, B. T. Marshall, M. Freidrich, and J. Gumbel (2015), Implications of odd-oxygen observations by TIMED/SABER instrument for lower D region ionospheric modeling, *J. Atmos. Sol. Terr. Phys.*, 124, 63-70, doi:[10.1016/j.jastp.2015.01.014](https://doi.org/10.1016/j.jastp.2015.01.014).
- F164 Huang, F., H. G. Mayr, J. M. Russell III, and M. G. Mlynczak (2014), Ozone and temperature decadal trends in the stratosphere, mesosphere, and lower thermosphere, based on measurements from SABER on TIMED, *Ann Geophys.*, 935-949, doi:[10.5194/angeo-32-935-2014](https://doi.org/10.5194/angeo-32-935-2014).
- F163 Verkhoglyadova, O. P., S. Wang, M. G. Mlynczak, L. A. Hunt, and G. P. Zank, Effects of two large solar energetic particle events on middle atmosphere nighttime odd-hydrogen and ozone content: AURA/MLS and TIMED/SABER measurements, *J. Geophys. Res. Space Physics*, 120, 12–29, doi:[10.1002/2014JA020609](https://doi.org/10.1002/2014JA020609).

- F162 Mlynczak, M. G., L. A. Hunt, C. J. Mertens, B. Thomas Marshall, J. M. Russell III, T. Woods, R. Earl Thompson, and L. L. Gordley (2014), Influence of solar variability on the infrared radiative cooling of the thermosphere from 2002 to 2014, *Geophys. Res. Lett.*, 41, 2508–2513, doi:[10.1002/2014GL059556](https://doi.org/10.1002/2014GL059556).
- F161 Verkhoglyadova, O. P., A. J. Mannucci, B. T. Tsuratani, M. G. Mlynczak, L. A. Hunt, and R. Redmon, (2014), Localized Thermosphere Ionization Events During the High Speed Stream Interval of 29 April - 5 May 2011, *J. Geophys. Res., Space Physics*, 120, doi: 10.1002/2014JA020535.
- F160 Smith, A. K., M. Lopez-Puertas, B. Funke, M. Garcia-Comas, M. G. Mlynczak, and L. A. Holt (2014), Nighttime ozone variability in the high latitude winter mesosphere, *J. Geophys. Res. Atmos.*, 119, 13,547–13,564, doi:10.1002/2014JD021987.
- F159 Latvakoski, H., M. G. Mlynczak, D. G. Johnson, R. P. Cageao, and D. P. Kratz, (2014), Far-Infrared Spectroscopy of the Troposphere (FIRST) – Calibration with a Cold Background, *Appl. Opt.*, 53, 5425- 5433, <http://dx.doi.org/10.1364/AO.53.005425>.

2013

- F158 Kato, S., F. G. Rose, X. Liu, B. A. Wielicki, and M. G. Mlynczak, (2013), Retrieval of atmospheric and cloud property anomalies and their trend from temporally and spatially averaged infrared spectra from space, *J. Climate*, <https://doi.org/10.1175/JCLI-D-13-00566.1>.
- F157 Jiang, G., W. Wang, J. Xu, J. Yue, A. G. Burns, J. Lei, M. Mlynczak, and J. M. Russell III, (2013) Responses of the lower thermosphere temperature to 9-day and 13.5-day oscillations of recurrent geomagnetic activity, *J. Geophys. Res. Space*, DOI: 10.1002/2013JA019406.
- F156 Ern, M. et al. (2013), Interaction of gravity waves with the QBO: A satellite perspective, *J. Geophys. Res. Atmos.*, DOI: 10.1002/2013JD020731
- F155 Oberheide, J., M. G. Mlynczak, C. N. Mosso, B. M. Schroeder, B. Funke, and A. Maute (2013), Impact of tropospheric tides on the nitric oxide 5.3 μm infrared cooling of the low-latitude thermosphere during solar minimum conditions, *J. Geophys. Res. Space Physics*, 118, 7283–7293, doi:10.1002/2013JA019278
- F154 Mlynczak, M. G., et al., (2013), Atomic hydrogen in the mesopause region observed by SABER, *J. Geophys. Res.*, DOI: 10.1002/2013JD021263.
- F153 Wendt, V., S. Wust, M. G. Mlynczak, J. M. Russell III, J.-H. Yee, and M. Bittner, (2013), Impact of atmospheric variability on validation of satellite-based temperature measurements, *J. Atmos. Sol. Terr. Phys.*, 102, 252-260.

- F152 Mlynczak, M. G., et al., (2013), Radiative constraints on the minimum atomic oxygen concentration in the mesopause region, *Geophys Res. Lett.*, 40, 3777–3780, doi:10.1002/grl.50725.
- F151 Phojanamongkolkij, N., S. Kato, B. A. Wielicki, P. C. Taylor, and M. G. Mlynczak, A comparison of climate signal trend detection uncertainty analysis methods, (2013), *J. Climate*, <https://doi.org/10.1175/JCLI-D-13-00400.1>.
- F150 Verkhoglyadova, O., B. T. Tsurutani, A. J. Mannucci, M. G. Mlynczak, L. A. Hunt, and L. Paxton, (2013) Ionospheric TEC, thermospheric cooling and $\Sigma[\text{O}/\text{N}_2]$ compositional changes during the 6-17 March 2012 magnetic storm interval (CAWSES II), *Journal of Atmospheric and Solar-Terrestrial Physics*, <http://dx.doi.org/10.1016/j.jastp.2013.11.009i>
- F149 Cooke, R., B. A. Wielicki, D. F. Young, and M. G. Mlynczak (2013), Value of Information for Earth Observing Systems, *Environ. Syst. Decis.*, DOI 10.1007/s10669-013-9451-8.
- F148 Li, T., N. Calvo, J. Yue, X. Dou, X. Xue, J. M. Russell III, M. G. Mlynczak, and C.-Y. She, (2013), Influence of El Niño-Southern Oscillation on the middle atmosphere temperature and ozone, *Geophys. Res. Lett.*, DOI: 10.1002/grl.50598.
- F147 Christensen, A. B., R. L. Bishop, S. A. Budzien, J. H. Hecht, M. G. Mlynczak, J. M. Russell III, A. W. Stephan, R. W. Walterscheid, (2013), Altitude profiles of lower thermospheric temperature from RAIDS/NIRS and TIMED/SABER remote sensing experiments, *J. Geophys. Res.*, DOI: 10.1002/jgra.50317.
- F146 Smith, A. K., V. L. Harvey, M. G. Mlynczak, M. Garcia-Comas, M. Kaufmann, E. Kyrola, M. Lopez-Puertas, I. McDade, C. E. Randall, J. M. Russell III, P. E. Sheese, M. Shiotani, W. R. Skinner, M Suzuki, K. A. Walker, Satellite Observations of Ozone in the Upper Mesosphere, *J. Geophys. Res.*, DOI: 10.1002/jgrd.50445.
- F145 Imai, K., et al., (2013), Validation of ozone data from the superconducting submillimeter-wave limb emission sounder (SMILES), *J. Geophys. Res.*, DOI: 10.1002/jgrd.50434.
- F144 Knipp, D. E., L. Kilcommons, L. Hunt, M. Mlynczak, V. Pilipenko, B. Bowman, Y. Deng, and K. Drake (2013), Thermospheric Overcooling Response to Sheath Driven Geospace Storms, *Geophys. Res. Lett.*, DOI: 10.1002/grl.50197.
- F143 Sheng-Yang Gu, Tao Li, Xiankang Dou, Qian Wu, M. G. Mlynczak, and J. M. Russell III, Observations of Quasi-Two-Day wave by TIMED/SABER and TIMED/TIDI (2013), *J. Geophys. Res.*, DOI: 10.1002/jgrd.50191.
- F142 Verkhoglyadova, Olga, B. T. Tsuratani, A. J. Mannucci, M. G. Mlynczak, L. A. Hunt, and T. Runge (2013), Variability of Ionospheric TEC During the Solar and Geomagnetic Minima (2008 and 2009): External High Speed Streams Drivers, *Ann. Geophys.*, doi:10.5194/angeo-31-263-2013.

- F141 Mlynczak, M. G., et al., (2013), Radiative and energetic constraints on the global annual mean atomic oxygen concentration in the mesopause region, *J. Geophys. Res.*, DOI: 10.1002/jgrd.50400.
- F140 Mlynczak, M. G. et al., (2013), Atomic oxygen in the mesosphere and lower thermosphere derived from SABER: Algorithm theoretical basis and measurement uncertainty, *J. Geophys. Res.*, DOI: 10.1002/jgrd.50401.
- F139 Wielicki, B. A., et al., (2013), Climate absolute radiance and refractivity observatory (CLARREO): Achieving climate change absolute accuracy on orbit, *Bull. Am. Met. Soc.*, DOI:10.1175/BAMS-D-12-00149.1.
- F138 Mast, J., M. G. Mlynczak, L. A. Hunt, B. T. Marshall, C. J. Mertens, J. M. Russell III, R. E. Thompson, and L. L. Gordley, (2013) Absolute concentrations of highly vibrationally excited OH($v= 9 + 8$) in the mesopause region derived from the TIMED/SABER instrument, *Geophys. Res. Lett.*, DOI: 10.1002/grl.50167.

2012

- F137 Mertens, C. J., X. Xu, D. Bilitza, M. G. Mlynczak, and J. M. Russell III, Empirical STORM-E Model I: Theoretical and observational basis (2012), *Adv. Space Res.*, <http://dx.doi.org/10.1016/j.asr.2012.09.009>
- F136 Mertens, C. J., X. Xu, D. Bilitza, M. G. Mlynczak, and J. M. Russell III, Empirical STORM-E Model II: Geomagnetic corrections to nighttime E-region densities (2012), *Adv. Space Res.*, <http://dx.doi.org/10.1016/j.asr.2012.09.014>
- F135 Siskind, D. E., M. H. Stevens, C. R. Englert, and M. Mlynczak, (2013) Comparisons of a photochemical model with observations of mesospheric hydroxyl and ozone, *J. Geophys. Res.*, DOI: 10.1029/2012JD017971.
- F134 Latvakoski, H., M. G. Mlynczak, D. G. Johnson, R. P. Cageao, D. P. Kratz, and K. Johnson (2013), Far-Infrared Spectroscopy of the Troposphere (FIRST) – Instrument Description and Calibration Performance, *Appl. Opt.*, 52, 264-273.
- F133 Phojanamongkolkij, N., et al., (2012), Parametric Study of Calibration Blackbody Uncertainty Using Design of Experiments, *JASMI*, 2, doi:10.4236/jasmi.2012.23020.
- F132 Solomon, S., A. Burns, B. Emery, M. G. Mlynczak, L. Qian, W. Wang, D. Weimer, and M. Wiltberger (2012), Modeling Studies of the Impact of High-Speed Streams and Co-Rotating Interaction Regions on the Thermosphere-Ionosphere, *J. Geophys. Res.*, 117, A00L11, doi:10.1029/2011JA017417.
- F131 Turner, D. D., E. J. Mlawer, G. Bianchini, M. P. Cadeddu, S. Crewell, J. S. Delamere, R. O. Knuteson, G. Maschwitz, M. Mlynczak, S. Paine, L. Palchetti, and D. C. Tobin (2012), Ground-based high spectral resolution observations of the terrestrial thermal

spectrum under extremely dry conditions, *Geophys. Res. Lett.*, 39, L10801, doi:10.1029/2012GL051542.

- F130 Mieruch, S., Weber, M., von Savigny, C., Rozanov, A., Bovensmann, H., Burrows, J. P., Bernath, P. F., Boone, C. D., Froidevaux, L., Gordley, L. L., Mlynczak, M. G., Russell III, J. M., Thomason, L. W., Walker, K. A., and Zawodny, J. M.: Global and long-term comparison of SCIAMACHY limb ozone profiles with correlative satellite data (2002–2008), *Atmos. Meas. Tech.*, 5, 771–788, doi:10.5194/amt-5-771-2012, 2012.
- F129 Jiuhou Lei, Alan G. Burns, Jeffrey P. Thayer, Wenbin Wang, Martin G. Mlynczak, Linda A. Hunt, Xiankang Dou, and Eric Sutton, Overcooling in the upper thermosphere during the recovery phase of the 2003 October storms *J. Geophys. Res.*, 117, A3, doi:10.1029/2011JA016994, 2012
- F128 Muscari, G., Cesaroni, C., Fiorucci, I., Smith, A. K., Froidevaux, L., and Mlynczak, M. G. (2012), Strato-mesospheric ozone measurements using ground-based millimeter-wave spectroscopy at Thule, Greenland, *J. Geophys. Res.*, 117, D07307, doi:[10.1029/2011JD016863](https://doi.org/10.1029/2011JD016863).

2011

- F127 Seiji Kato, Bruce A. Wielicki, Fred G. Rose, Xu Liu, Patrick C. Taylor, David P. Kratz, Martin G. Mlynczak, David F. Young, Nipa Phojanamongkolkij, Sunny Sun-Mack, Walter F. Miller, Yan Chen, Detection of atmospheric changes in spatially and temporally averaged infrared spectra observed from space, *J. Climate*, 2011, doi: 10.1175/JCLI-D-10-05005.1
- F126 L. A. Hunt, M. G. Mlynczak, B. T. Marshall, C. J. Mertens, J. C. Mast, R. E. Thompson, L. L. Gordley, and J. M. Russell, Infrared radiation in the thermosphere at the onset of solar cycle 24, *Geophys. Res. Lett.*, 38, L15802, doi:10.1029/2011GL048061, 2011
- F125 A. Taori, N. Dashora, K. Raghunath, J. M. Russell, and M. G. Mlynczak, Simultaneous mesosphere-thermosphere-ionosphere parameter measurements over Gadanki (13.5°N, 79.2°E): First results, *J. Geophys. Res.*, 116, A07308, doi:10.1029/2010JA016154, 2011
- F124 O. P. Verkhoglyadova, B. T. Tsurutani, A. J. Mannucci, M. G. Mlynczak, L. A. Hunt, A. Komjathy, and T. Runge, Ionospheric VTEC and thermospheric infrared emission dynamics during corotating interaction region and high-speed stream intervals at solar minimum: 25 March to 26 April 2008, *J. Geophys. Res.*, 116, A09325, doi:10.1029/2011JA016604, 2011
- F123 M. Ern, P. Preusse, J. C. Gille, C. L. Hepplewhite, M. G. Mlynczak, J. M. Russell, and M. Riese, Implications for atmospheric dynamics derived from global observations of gravity wave momentum flux in stratosphere and mesosphere, *J. Geophys. Res.*, 116, D19107, doi:10.1029/2011JD015821, 2011

2010

- F122 Martin G. Mlynczak, Linda A. Hunt, Janet U. Kozyra, and James M. Russell III, Short-term periodic features observed in the infrared cooling of the thermosphere and in solar and geomagnetic indexes from 2002 to 2009, *Proc. R. Soc. A*, 466:3409-3419; , doi:10.1098/rspa.2010.0077, 2010
- F121 J. Xu, A. K. Smith, G. Jiang, H. Gao, Y. Wei, M. G. Mlynczak, and J. M. Russell, Strong longitudinal variations in the OH nightglow, *Geophys. Res. Lett.*, 37, L21801, doi:10.1029/2010GL043972, 2010
- F120 F. T. Huang, R. D. McPeters, P. K. Bhartia, H. G. Mayr, S. M. Frith, J. M. Russell, and M. G. Mlynczak, Temperature diurnal variations (migrating tides) in the stratosphere and lower mesosphere based on measurements from SABER on TIMED, *J. Geophys. Res.*, 115, D16121, doi:10.1029/2009JD013698, 2010
- F119 G. Lu, M. G. Mlynczak, L. A. Hunt, T. N. Woods, and R. G. Roble, On the relationship of Joule heating and nitric oxide radiative cooling in the thermosphere, *J. Geophys. Res.*, 115, A05306, doi:10.1029/2009JA014662, 2010
- F118 A. K. Smith, D. R. Marsh, M. G. Mlynczak, and J. C. Mast, Temporal variations of atomic oxygen in the upper mesosphere from SABER, *J. Geophys. Res.*, 115, D18309, doi:10.1029/2009JD013434, 2010
- F117 L. Qian, S. C. Solomon, and M. G. Mlynczak, Model simulation of thermospheric response to recurrent geomagnetic forcing, *J. Geophys. Res.*, 115, A10301, doi:10.1029/2010JA015309, 2010
- F116 F. T. Huang, H. G. Mayr, J. M. Russell, and M. G. Mlynczak, Ozone diurnal variations in the stratosphere and lower mesosphere, based on measurements from SABER on TIMED, *J. Geophys. Res.*, 115, D24308, doi:10.1029/2010JD014484, 2010
- F115 S. Dikty, H. Schmidt, M. Weber, C. von Savigny, and M. G. Mlynczak, Daytime ozone and temperature variations in the mesosphere: a comparison between SABER observations and HAMMONIA model, *Atmos. Chem. Phys.*, 10, 8331-8339, doi:10.5194/acp-10-8331-20102010.
- F114 Mlynczak, M. G., et al., Observations of infrared radiative cooling in the thermosphere on daily to multiyear timescales from the TIMED/SABER instrument, *J. Geophys. Res.*, 115, A03309, doi:10.1029/2009JA014713, 2010.
- F113 S.M. Smith, J. Baumgardner, C.J. Mertens, J.M. Russell, M.G. Mlynczak, M. Mendillo, Mesospheric OH Temperatures: Simultaneous Ground-based and SABER OH Measurements over Millstone Hill, *Advances in Space Research*, 45, 239-246, 2010.
- 2009**
- F112 Xu, J., A. K. Smith, H.-L. Liu, W. Yuan, Q. Wu, G. Jiang, M. G. Mlynczak, and J. M. Russell III, Estimation of the equivalent Rayleigh friction in MLT region from the

migrating diurnal tides observed by TIMED, *J. Geophys. Res.*, doi:10.1029/2009JD012209, 2009.

- F111 Winick J. R., P. P. Wintersteiner, R. H. Picard, D. Esplin, M. G. Mlynczak, J. M. Russell III, L. L. Gordley, OH layer characteristics during unusual boreal winters of 2004 and 2006, *J. Geophys. Res.*, 114, A02303, doi:10.1029/2008JA013688, 2009.
- F110 Dou, X., et al., Seasonal oscillations of middle atmosphere temperature observed by Rayleigh lidars and their comparisons with TIMED/SABER observations, *J. Geophys. Res.*, 114, D20103, doi:10.1029/2008JD011654, 2009.
- F109 Mertens, C. J., J. M. Russell III, M. G. Mlynczak, C-Y She, F. J. Schmidlin, R. A. Goldberg, M. López-Puertas, P. P. Wintersteiner, R. H. Picard, J. R. Winick, X. Xu, Kinetic temperature and carbon dioxide from broadband infrared limb emission measurements taken from the TIMED/SABER instrument, *Adv. Space Res.*, 43, 1, 15-27, 2009.
- F108 Mertens, C. J., J. R. Winick, R. H. Picard, D. S. Evans, M. López-Puertas, P. P. Wintersteiner, X. Xu, M. G. Mlynczak, J. M. Russell III, Influence of solar-geomagnetic disturbances on SABER measurements of 4.3 μ m emission and the retrieval of kinetic temperature and carbon dioxide, *Adv. Space Res.*, 43, 9, 1325-1336, 2009.
- F107 Xu, J., and 8 co-authors, Seasonal and QBO Variations in the migrating diurnal tide observed by TIMED, *J. Geophys. Res.*, 114, D20, doi:10.1029/2008JD011654, 2009.
- F106 Hecht, J. H., and 10 co-authors, Imaging of Atmospheric Gravity Waves in the Stratosphere and Upper Mesosphere using Satellite and Ground-Based Observations over Australia During the TWPICE Campaign, *J. Geophys. Res.*, 114, D18, doi:10.1029/2008JD011259, 2009.
- F105 Preusse, P., S. D. Eckermann, M. Ern, J. Oberheide, R. H. Picard, R. Roble, M. Riese, J. M. Russell III, and M. Mlynczak, Global ray tracing simulations of the SABER gravity wave climatology, *J. Geophys. Res.*, 114, D8, doi:10.1029/2008JD011214, 2009.
- F104 Offermann D., O. Gusev, M. Donner, J. M. Forbes, M. Hagan, M. G. Mlynczak, J. Oberheide, P. Preusse, H. Schmidt, J. M. Russell III, Relative intensities of middle atmosphere waves, *J. Geophys. Res.*, 114, D06110, doi:10.1029/2008JD010662, 2009.
- F103 Clilverd, M. A., A. Seppala, C. J. Rodger, M. G. Mlynczak, and J. U. Kozyra, Additional stratospheric NOx production by relativistic electron precipitation during the spring 2004 NOx descent event, *J. Geophys. Res.*, 114, A4, doi:10.1029/2008JA013472, 2009.
- F102 Fechine, J., et al., First observation of an undular mesospheric bore in a Doppler duct, *Ann. Geophys.*, 27, 1399-1406, 2009.

- F101 Rong P. P., J. M. Russell III, M. G. Mlynczak, E. E. Remsberg, B. T. Marshall, L. L. Gordley, M. López-Puertas, Validation of Thermosphere Ionosphere Mesosphere Energetics and Dynamics/Sounding of the Atmosphere using Broadband Emission Radiometry (TIMED/SABER) v1.07 ozone at $9.6 \mu m$ in altitude range 15–70 km, *J. Geophys. Res.*, 114, D04306, doi:10.1029/2008JD010073, 2009.
- F100 Jeffrey M. Forbes, Xiaoli Zhang, Scott E. Palo, James Russell, Christopher J. Mertens, and Martin Mlynczak, Kelvin waves in stratosphere, mesosphere and lower thermosphere temperatures as observed by TIMED/SABER during 2002-2006 *Earth Planets Space*, 61, 4, 447-453, 2009.
- F99 Takahashi, H. et al., Possible influence of ultra-fast Kelvin waves on the equatorial ionosphere evening uplifting, *Earth, Planets and Space*, 61, 4, 455-462, 2009.
- 2008**
- F98 Mertens, C. J., J. R. Fernandez, X. Xu, D. S. Evans, M. G. Mlynczak, and J. M. Russell III, A new source of auroral infrared emission observed by TIMED/SABER, *Geophys. Res. Lett.*, 35, 17-20, 2008.
- F97 Harries, J., B. Carli, R. Rizzi, C. Serio, M. G. Mlynczak, L. Palchetti, T. Maestri, Helen E. Brindley, and G. Masiello, Far Infrared Earth, *Rev. Geophys.*, doi:10.1029/2007RG000233, 2008.
- F96 Zhu, X. J.-H. Yee, E. R. Talaat, M. Mlynczak, and J. M. Russell III, Diagnostic analysis of tidal winds and the Eliassen-Palm flux divergence in the mesosphere and lower thermosphere from TIMED/SABER temperatures, *J. Atmos. Sci.*, 65, 12, 3840–3859, DOI: 10.1175/2008JAS2801.1, 2008.
- F95 Siskind, D. E., D. R. Marsh, M. G. Mlynczak, F. J. Martin-Torres, J. M. Russell III, Decreases in atomic hydrogen over the summer pole: Evidence for dehydration from Polar Mesospheric Clouds?, *Geophys. Res. Lett.*, 35, 13, doi:10.1029/2008GL033742, 2008.
- F94 Remsberg, E. E., et al., Assessment of the quality of the retrieved temperature versus pressure profiles in the middle atmosphere from TIMED/SABER, *J. Geophys. Res.*, 113, D17, doi:10.1029/2008JD010013, 2008.
- F93 Smith, A. K., D. R. Marsh, J. M. Russell III, M. G. Mlynczak, F. J. Martin-Torres, and E. Kyrola, Satellite observations of high nighttime ozone at the equatorial mesopause, *J. Geophys. Res.*, 113, D17, doi:10.1029/2008JD010066, 2008.
- F92 Garcia-Comas, M., et al., Error in SABER temperature caused by non-LTE model parameters, *J. Geophys. Res.*, 113, D24, doi:10.1029/2008JD010105, 2008.

- F91 Forbes, J. M., X. Zhang, S. E. Palo, J. M. Russell III, C. Mertens, and M. G. Mlynczak, Tidal variability in the ionospheric dynamo region, *J. Geophys. Res.*, 113, A2, doi:10.1029/2007JA012737, 2008.
- F90 Mlynczak, M. G., F. Javier Martin-Torres, Christopher J. Mertens, B. Thomas Marshall, R. Earl Thompson, Janet U. Kozyra, Ellis E. Remsberg, Larry L. Gordley, James M. Russell III, and Thomas Woods, Solar-terrestrial coupling evidenced by periodic behavior in geomagnetic indexes and the infrared energy budget of the thermosphere, *Geophys. Res. Lett.*, 35, 5, doi:10.1029/2007GL032620, 2008.
- F89 Beig, G., J. Scheer, M. G. Mlynczak, and P. Kechkut, Overview of the temperature response in the mesosphere and lower thermosphere to solar activity, *Rev. Geophys.* 46, 3, doi:10.1029/2007RG000236, 2008.
- F88 Schwartz, M. et al., Validation of the Aura Microwave Limb Sounder Temperature and Geopotential Height Measurements, *J. Geophys. Res.*, 113, D15, doi:10.1029/2007JD008783, 2008.
- F87 C. M. Wrasse, J. Fechine, H. Takahashi, C. M. Denardini, J. Wickert, M. G. Mlynczak, J. M. Russell and C. L. Barbosa, Temperature comparison between CHAMP radio occultation and TIMED/SABER measurements in the lower stratosphere, *Adv. Space Res.*, 41, 1423-1428, 2008.
- F86 J. Fechine, C.M. Wrasse, H. Takahashi, M.G. Mlynczak and J.M. Russell, Lower-mesospheric inversion layers over Brazilian equatorial region using TIMED/SABER temperature profiles, *Adv. Space Res.*, 41, 1447-1453, 2008.
- F85 Sun, W., Y. Hu, N. Loeb, B. Lin, and M. G. Mlynczak, Using CERES data to Evaluate the Infrared Flux Derived from Diffusivity Approximation, *IEEE Geosci. Remote Sens. Lett.*, 5, 17-20, 2008.
- F84 Manney, G. L., K. Kruger, S. Pawson, K. Minschwaner, M. Schwartz, W. Daffer, N. Livesey, M. G. Mlynczak, E. E. Remsberg, J. M. Russell, and J. Waters, The evolution of the stratopause during the 2006 major warming: Satellite data and assimilated meteorological analyses, *J. Geophys. Res.*, 113, D11115, doi:10.1029/2007JD009097, 2008.
- F83 Ern, M., P. Preusse, M. Krebsbach, M. G. Mlynczak, and J. M. Russell III, Equatorial wave analysis from SABER and ECMWF temperatures, *Atmos. Chem. Phys.* 8, 845-869, 2008.
- F82 Manney, G. L., et al., The high arctic in extreme winters: Vortex, temperature, and MLS and ACE-FTS trace gas evolution, *Atmos. Chem. Phys.*, 8, 505-522, 2008.
- F81 Huang, F. T., H. G. Mayr, C. A. Reber, J. M Russell, III, M. G. Mlynczak, and J. G. Mengel, Ozone quasi-biennial oscillations (QBO), semiannual oscillations (SAO), and

correlations with temperature in the mesosphere, lower thermosphere, and stratosphere, based on measurements from SABER on TIMED and MLS on UARS, *J. Geophys. Res.*, 113, A01316, doi:10.1029/2007JA012634, 2008.

- F80 Huang, F. T., H. Mayr, J. M. Russell, M. G. Mlynczak, and C. A. Reber, Ozone diurnal variations and mean profiles in the mesosphere, lower thermosphere, and stratosphere, based on measurements from SABER on TIMED, *J. Geophys. Res.*, doi:10.1029/2007JA012739, 2008.

2007

- F79 Hauchecorne A., J.-L. Bertaux, F. Dalaudier, J. M. Russell III, M. G. Mlynczak, E. Kyrölä, D. Fussen, Large increase of NO₂ in the north polar mesosphere in January–February 2004: Evidence of a dynamical origin from GOMOS/ENVISAT and SABER/TIMED data, *Geophys. Res. Lett.*, 34, L03810, doi:10.1029/2006GL027628., 2007.
- F78 Mlynczak M. G., F. J. Martin-Torres, J. M. Russell III, Correction to “Energy transport in the thermosphere during the solar storms of April 2002”, *J. Geophys. Res.*, 112, A02303, doi:10.1029/2006JA012008, 2007.
- F77 Palo S. E., J. M. Forbes, X. Zhang, J. M. Russell III, M. G. Mlynczak, An eastward propagating two-day wave: Evidence for nonlinear planetary wave and tidal coupling in the mesosphere and lower thermosphere, *Geophys. Res. Lett.*, 34, L07807, doi:10.1029/2006GL027728, 2007.
- F76 Smith A. K., D. V. Pancheva, N. J. Mitchell, D. R. Marsh, J. M. Russell III, M. G. Mlynczak, A link between variability of the semidiurnal tide and planetary waves in the opposite hemisphere, *Geophys. Res. Lett.*, 34, L07809, doi:10.1029/2006GL028929, 2007.
- F75 Xu J., H.-L. Liu, W. Yuan, A. K. Smith, R. G. Roble, C. J. Mertens, J. M. Russell III, M. G. Mlynczak, Mesopause structure from Thermosphere, Ionosphere, Mesosphere, Energetics, and Dynamics (TIMED)/Sounding of the Atmosphere Using Broadband Emission Radiometry (SABER) observations, *J. Geophys. Res.*, 112, D09102, doi:10.1029/2006JD007711, 2007.
- F74 Takahashi H., et al., Signatures of ultra fast Kelvin waves in the equatorial middle atmosphere and ionosphere, *Geophys. Res. Lett.*, 34, doi:10.1029/2007GL029612, 2007.
- F73 Mlynczak M. G., B. T. Marshall, F. J. Martin-Torres, J. M. Russell III, R. E. Thompson, E. E. Remsberg, L. L. Gordley, Sounding of the Atmosphere using Broadband Emission Radiometry observations of daytime mesospheric O₂(¹Δ) 1.27 μ m emission and derivation of ozone, atomic oxygen, and solar and chemical energy deposition rates, *J. Geophys. Res.*, 112, D15306, doi:10.1029/2006JD008355, 2007.

- F72 Liu H.-L., T. Li, C.-Y. She, J. Oberheide, Q. Wu, M. E. Hagan, J. Xu, R. G. Roble, M. G. Mlynczak, J. M. Russell III, Comparative study of short-term diurnal tidal variability, *J. Geophys. Res.*, 112, D18108, doi:10.1029/2007JD008542, 2007.
- F71 Gardner J. L., B. Funke, M. G. Mlynczak, M. López-Puertas, F. J. Martin-Torres, J. M. Russell III, S. M. Miller, R. D. Sharma, J. R. Winick, Comparison of nighttime nitric oxide 5.3 μ m emissions in the thermosphere measured by MIPAS and SABER, *J. Geophys. Res.*, 112, A10301, doi:10.1029/2006JA011984, 2007.
- F70 D. Offermann, M. Jarisch, H. Schmidt, J. Oberheide, K.U. Grossmann, O. Gusev, J. M. Russell III and M. G. Mlynczak, The “wave turbopause” *J. Atmos. Sol-Terr. Phys.*, 69, 2139-2158, 2007.
- F69 M. G. Shepherd, D.L. Wu, I.N. Fedulina, S. Gurubaran, J. M. Russell, M. G. Mlynczak and G. G. Shepherd, Stratospheric warming effects on the tropical mesospheric temperature field *J. Atmos. Sol-Terr. Phys.*, 69, 2309-2337, 2007.
- F68 M. J. López-González, M. García-Comas, E. Rodríguez, M. López-Puertas, M.G. Shepherd, G.G. Shepherd, S. Sargoytchev, V.M. Aushev, S.M. Smith, M. G. Mlynczak, J.M. Russell, S. Brown, Y.-M. Cho and R.H. Wiens, Ground-based mesospheric temperatures at mid-latitude derived from O₂ and OH airglow SATI data: Comparison with SABER measurements, *J. Atmos. Sol-Terr. Phys.*, 2379-2390, 2007.
- F67 Xu, J., A. K. Smith, W. Yuan, H. Liu, Q. Wu, M. G. Mlynczak, and J. M. Russell, The global structure and long term variations of zonal mean temperature observed by TIMED/SABER, *J. Geophys. Res.*, doi:10.1029/2007JD008546, 2007.
- F66 Mlynczak, M. G., F. J. Martin-Torres, B. T. Marshall, E. Thompson, J. Williams, T. Turpin, D. P. P. Kratz, J. M. Russell III, T. N. Woods, and L. L. Gordley (2007), Evidence for a solar cycle influence on the infrared energy budget and radiative cooling of the thermosphere, *J. Geophys. Res.*, doi:10.1029/2006JA012194.
- F65 Huang, F. T., H. Mayr, J. M. Russell III, M. G. Mlynczak, C. A. Reber, and J. G. Mengel, Ozone quasi-biennial oscillations (QBO), semiannual oscillations (SAO), and correlations with temperature in the mesosphere, lower thermosphere, and stratosphere, based on measurements from SABER on TIMED and MLS on UARS, *J. Geophys. Res.* doi:10.1029/2007JA012634, 2007.
- F64 Baker, D. J., B. K. Thurgood, W. K. Harrison, M. G. Mlynczak, and J. M. Russell, Equatorial enhancement of the nighttime OH mesospheric infrared airglow, *Phys. Scr.*, 75, 615-619, doi:10.1088/0031-8949/75/5/004, 2007.
- F63 Christopher J. Mertens, Jeffrey C. Mast, Jeremy R. Winick, James M. Russell III, Martin G. Mlynczak and David S. Evans, Ionospheric E-region response to solar-geomagnetic storms observed by TIMED/SABER and application to IRI storm-model development, *Adv. Space Res.*, 39, 5, 715-728, 2007.

2006

- F62 Mlynczak, M. G., D. G. Johnson, H. Latvakoski, K. Jucks, M. Watson, G. Bingham, D. P. Kratz, W. A. Traub, S. J. Wellard, and C. R. Hyde, First light from the far-infrared spectroscopy of the troposphere (FIRST) instrument, *Geophys. Res. Lett.*, 33, L07704, doi:10.1029/2005GL025114, 2006.
- F61 Shiokawa, K., S. Suzuki, Y. Otsuka, T. Ogawa, T. Nakamura, M. G. Mlynczak and J. M. Russell, A Multi-Instrument Measurement of a Mesospheric Front-Like at the Equator Structure, *Journal of the Meteorological Society of Japan*, Vol. 84A, pp.305-316, 2006.
- F60 Oberheide J., D. Offermann, J. M. Russell III, M. G. Mlynczak, Intercomparison of kinetic temperature from 15 μ m CO 2 limb emissions and OH*(3,1) rotational temperature in nearly coincident air masses: SABER, GRIPS, *Geophys. Res. Lett.*, 33, L14811, doi:10.1029/2006GL026439, 2006.
- F59 Huang F. T., H. G. Mayr, C. A. Reber, J. Russell, M. Mlynczak, J. Mengel, Zonal-mean temperature variations inferred from SABER measurements on TIMED compared with UARS observations, *J. Geophys. Res.*, 111, A10S07, doi:10.1029/2005JA011427, 2006.
- F58 Marsh D. R., A. K. Smith, M. G. Mlynczak, J. M. Russell III, SABER observations of the OH Meinel airglow variability near the mesopause, *J. Geophys. Res.*, 111, A10S05, doi:10.1029/2005JA011451, 2006.
- F57 Offermann, D., M. Jarisch, J. Oberheide, O. Gusev, I. Wohltmann, J.M. Russell III and M.G. Mlynczak, Global wave activity from upper stratosphere to lower thermosphere: A new turbopause concept, *J. Atmos. Sol-Terr. Phys*, 68, 15, 1709-1729, 2006.
- F56 Preusse, P., M. Ern, S. D. Eckermann, C. D. Warner, R. H. Picard, P. Knieling, M. Krebsbach, J. M. Russell III, M. G. Mlynczak, C. J. Mertens, and M. Riese, Tropopause to mesopause gravity waves in August: Measurement and modeling, *J. Atmos. Sol-Terr. Phys*, 68, 15, 1730-1751
- F55 Riggin, D. M., H-L Liu, R. S. Lieberman, R. G. Roble, J. M. Russell III, C. J. Mertens, M. G. Mlynczak, D. Pancheva, S. J. Franke, Y. Murayama, A. H. Manson, C. E. Meek and R. A. Vincent, Observations of the 5-day wave in the mesosphere and lower thermosphere, *J. Atmos. Sol-Terr. Phys*, 68, 323-339, 2006.
- F54 Kozyra, J. U., G. Crowley, B. A. Emery, X. H. Fang, G. Maris, M. G. Mlynczak, R. J. Niedziejewski, S. E. Palo, L. J. Paxton, C. E. Randall, P.-P. Rong, J. M. Russell III, W. Skinner, S. C. Solomon, E. R. Talaat, Q. Wu, J.-H. Yee, Response of the upper/middle atmosphere to coronal holes and powerful high-speed solar wind streams in 2003, in Recurrent Magnetic Storms: Corotating Solar Wind Streams, edited by B. T. Tsurutani, R. L. McPherron, W. D. Gonzalez, G. Lu, J. H. A. Sobral, and N. Gopalswamy, *Geophysical Monograph Series 167*, American Geophysical Union, 10.1029/167GM24, 319-340, 2006.

- F53 F. T. Huang, H. G. Mayr, C. A. Reber, J. M. Russell, M Mlynczak, and J. G. Mengel, Stratospheric and mesospheric temperature variations for the quasi-biennial and semiannual (QBO and SAO) oscillations based on measurements from SABER (TIMED) and MLS (UARS), Page(s) 2131-2149, *Annales Geophysicae*, 2006.
- F52 Xu J., C. Y. She, W. Yuan, C. Mertens, M. Mlynczak, J. Russell, Comparison between the temperature measurements by TIMED/SABER and lidar in the midlatitude, *J. Geophys. Res.*, 111, A10S09, doi:10.1029/2005JA011439, 2006.
- F51 Huang F. T., H. G. Mayr, C. A. Reber, T. Killeen, J. Russell, M. Mlynczak, W. Skinner, J. Mengel, Diurnal variations of temperature and winds inferred from TIMED and UARS measurements, *J. Geophys. Res.*, 111, A10S04, doi:10.1029/2005JA011426, 2006.
- F50 Forbes J. M., J. Russell, S. Miyahara, X. Zhang, S. Palo, M. Mlynczak, C. J. Mertens, M. E. Hagan, Troposphere-thermosphere tidal coupling as measured by the SABER instrument on TIMED during July–September 2002, *J. Geophys. Res.*, 111, A10S06, doi:10.1029/2005JA011492, 2006.
- F49 Zhang X., J. M. Forbes, M. E. Hagan, J. M. Russell III, S. E. Palo, C. J. Mertens, M. G. Mlynczak, Monthly tidal temperatures 20–120 km from TIMED/SABER, *J. Geophys. Res.*, 111, A10S08, doi:10.1029/2005JA011504, 2006.

2005

- F48 Palo S. E., J. M. Forbes, X. Zhang, J. M. Russell III, C. J. Mertens, M. G. Mlynczak, G. B. Burns, P. J. Espy, T. D. Kawahara (2005), Planetary wave coupling from the stratosphere to the thermosphere during the 2002 Southern Hemisphere pre-stratwarm period, *Geophys. Res. Lett.*, 32, L23809, doi:10.1029/2005GL024298.
- F47 Mlynczak M. G., et al. (2005), Energy transport in the thermosphere during the solar storms of April 2002, *J. Geophys. Res.*, 110, A12S25, doi:10.1029/2005JA011141.
- F46 Rolando R. Garcia, Ruth Lieberman, James M. Russell III, and Martin G. Mlynczak Large-Scale Waves in the Mesosphere and Lower Thermosphere Observed by SABER, *Journal of the Atmospheric Sciences*, Volume 62, Issue 12 (December 2005) pp. 4384–4399 doi:10.1175/JAS3612.1
- F45 Kratz, D. P., Martin G. Mlynczak, Christopher J. Mertens, Helen Brindley, Larry L. Gordley, Javier Martin-Torres, Ferenc M. Miskolczi and David D. Turner, An inter-comparison of far-infrared line-by-line radiative transfer models, *Journal of Quantitative Spectroscopy and Radiative Transfer*, Volume 90, Issues 3-4, 1 February 2005, Pages 323-341
- F44 Zhu X., J.-H. Yee, E. R. Talaat, M. Mlynczak, L. Gordley, C. Mertens, J. M. Russell III (2005), An algorithm for extracting zonal mean and migrating tidal fields in the middle atmosphere from satellite measurements: Applications to TIMED/SABER–measured

temperature and tidal modeling, *J. Geophys. Res.*, 110, D02105, doi:10.1029/2004JD004996.

- F43 Petelina S. V., D. A. Degenstein, E. J. Llewellyn, N. D. Lloyd, C. J. Mertens, M. G. Mlynczak, J. M. Russell III (2005), Thermal conditions for PMC existence derived from Odin/OSIRIS and TIMED/SABER data, *Geophys. Res. Lett.*, 32, L17813, doi:10.1029/2005GL023099.

2004

- F42 Mertens C. J., et al. (2004), SABER observations of mesospheric temperatures and comparisons with falling sphere measurements taken during the 2002 summer MaCWave campaign, *Geophys. Res. Lett.*, 31, L03105, doi:10.1029/2003GL018605.
- F41 López-Puertas M., M. García-Comas, B. Funke, R. H. Picard, J. R. Winick, P. P. Wintersteiner, M. G. Mlynczak, C. J. Mertens, J. M. Russell III, L. L. Gordley (2004), Evidence for an OH(v) excitation mechanism of CO₂ 4.3 μm nighttime emission from SABER/TIMED measurements, *J. Geophys. Res.*, 109, D09307, doi:10.1029/2003JD004383.
- F40 Mlynczak M. G., F. J. Martin-Torres, D. G. Johnson, D. P. Kratz, W. A. Traub, K. Jucks (2004), Observations of the O(³P) fine structure line at 63 μm in the upper mesosphere and lower thermosphere, *J. Geophys. Res.*, 109, A12306, doi:10.1029/2004JA010595.

2003

- F39 Yang P., M. G. Mlynczak, H. Wei, D. P. Kratz, B. A. Baum, Y. X. Hu, W. J. Wiscombe, A. Heidinger, M. I. Mishchenko, Spectral signature of ice clouds in the far-infrared region: Single-scattering calculations and radiative sensitivity study, *J. Geophys. Res.*, 108 (D18), 4569, doi:10.1029/2002JD003291, 2003.
- F38 Siskind D. E., M. H. Stevens, J. T. Emmert, D. P. Drob, A. J. Kochenash, J. M. Russell III, L. L. Gordley, M. G. Mlynczak, Signatures of shuttle and rocket exhaust plumes in TIMED/SABER radiance data, *Geophys. Res. Lett.*, 30 (15), 1819, doi:10.1029/2003GL017627, 2003.
- F37 Remsberg E., G. Lingenfelser, V. L. Harvey, W. Grose, J. Russell III, M. Mlynczak, L. Gordley, B. T. Marshall, On the verification of the quality of SABER temperature, geopotential height, and wind fields by comparison with Met Office assimilated analyses, *J. Geophys. Res.*, 108 (D20), 4628, doi:10.1029/2003JD003720, 2003.
- F36 Mlynczak M., et al., The natural thermostat of nitric oxide emission at 5.3 μm in the thermosphere observed during the solar storms of April 2002, *Geophys. Res. Lett.*, 30 (21), 2100, doi:10.1029/2003GL017693, 2003.
- F35 Beig, G., P. Keckhut, R. P. Lowe, R. Roble, M. G. Mlynczak, J. Scheer, V. Fomichev, D. Offerman, W. J. R. French, M. G. Shepherd, A. I. Semenov, E. E. Remsberg, C. Y. She, F. J. Lubken, J. Bremer, B. R. Clemesha, J. Stegman, F. Sigernes, and S. Fadnavis,

Review of Mesospheric Temperature Trends, *Rev. Geophys.*, 41, doi:10.1029/2002RG00012122, 2003.

- F34 Tansock, J. J., S. Hansen, K. Paskett, A. Shumway, J. Peterson, J. Stauder, L. Gordley, Y. Wang, M. Melbert, J. Russell, and M. G. Mlynczak, SABER Ground Calibration, *Int. J. Remote Sens.*, 24, 403-420, 2003.

2002

- F33 Mlynczak, M., A comparison of space-based observations of the energy budgets of the mesosphere and the troposphere, *Journal of Atmospheric and Solar-Terrestrial Physics*, Volume 64, Issues 8-11, 7 May 2002, Pages 877-887.
- F32 Mertens C. J., M. G. Mlynczak, M. Lopez-Puertas, and E. E. Remsberg, Impact of non-LTE processes on middle atmospheric water vapor retrievals from simulated measurements of $6.8 \mu\text{m}$ Earth limb emission, *Geophys. Res. Lett.*, 29 (9), doi:10.1029/2001GL014590, 2002.

2001

- F31 Mlynczak, M. G., F. Morgan, J.-H. Yee, P. Espy, D. Murtagh, B. Marshall, F. Schmidlin, Simultaneous measurements of the $\text{O}_2(^1\Delta)$ and $\text{O}_2(^1\Sigma)$ airglows and ozone in the daytime mesosphere, *Geophys. Res. Lett.*, 28(6), 999-1002, 10.1029/2000GL012423, 2001.

2000

- F30 Mlynczak, M. G., A contemporary assessment of the middle atmosphere energy budget, in Atmospheric Science Across the Stratopause, edited by D. Siskind, S. Eckermann, and M. Summers, *Geophysical Monographs Series 123*, American Geophysical Union, p. 37-52, 2000.
- F29 Mlynczak, M. G., R. R. Garcia, R. G. Roble, M. Hagan, Solar energy deposition rates in the mesosphere derived from airglow measurements: Implications for the ozone model deficit problem, *J. Geophys. Res.*, 105(D13), 17527-17538, 10.1029/2000JD900222, 2000.

1999

- F28 Zhou, D. K., M. G. Mlynczak, M. López-Puertas, G. Zaragoza, Evidence of non-LTE effects in mesospheric water vapor from spectrally-resolved emissions observed by CIRRIS-1A, *Geophys. Res. Lett.*, 26(1), 67-70, 10.1029/1998GL900233, 1999.
- F27 Mlynczak, M. G., A new perspective on the molecular oxygen and hydroxyl airglow emissions, *J. Geophys. Res.*, 104(D22), 27535-27544, 10.1029/1999JD900839, 1999.
- F26 Mlynczak, M. G., C. J. Mertens, R. R. Garcia, R. W. Portmann, A detailed evaluation of the stratospheric heat budget 2. Global radiation balance and diabatic circulations, *J. Geophys. Res.*, 104(D6), 6039-6066, 10.1029/1998JD200099, 1999.

F25 Mertens, C. J., M. G. Mlynczak, R. R. Garcia, R. W. Portmann, A detailed evaluation of the stratospheric heat budget 1. Radiation transfer, *J. Geophys. Res.*, 104(D6), 6021-6038, 10.1029/1998JD200100, 1999.

F24 Mlynczak, M. G.III, Kinetic requirements for the measurement of mesospheric water vapor at 6.8 um under non-LTE conditions, *Geophys. Res. Lett.*, 26(1), 63-66, 10.1029/1998GL900232, 1999.

1998

F23 Mlynczak, M. G., D. K. Zhou, S. M. Adler-Golden, Kinetic and spectroscopic requirements for the inference of chemical heating rates and atomic hydrogen densities from OH Meinel band measurements, *Geophys. Res. Lett.*, 25(5), 647-650, 10.1029/98GL00325, 1998.

F22 Zhou, D. K., M. G. Mlynczak, G. E. Bingham, J. O. Wise, R. M. Nadile, CIRRIS-1A limb spectral measurements of mesospheric 9.6-um airglow and ozone, *Geophys. Res. Lett.*, 25(5), 643-646, 10.1029/98GL00236, 1998.

F21 Mlynczak, M. G., D. K. Zhou, Kinetic and spectroscopic requirements for the measurement of mesospheric ozone at 9.6 um under non-LTE conditions, *Geophys. Res. Lett.*, 25(5), 639-642, 10.1029/98GL00092, 1998.

1997

F20 Mlynczak, M. G., Energetics of the mesosphere and lower thermosphere and the SABER experiment, *Advances in Space Research*, Volume 20, Issue 6, 1997, Pages 1177-1183

1996

F19 Mlynczak, M. G., B. T. Marshall, A reexamination of the role of solar heating in the O₂ atmospheric and infrared atmospheric bands, *Geophys. Res. Lett.*, 23(6), 657-660, 10.1029/96GL00145, 1996.

F18 Edwards, D. P., J. B. Kumer, M. López-Puertas, M. G. Mlynczak, A. Gopalan, J. C. Gille, A. Roche, Non-local thermodynamic equilibrium limb radiance near 10 um as measured by UARS CLAES, *J. Geophys. Res.*, 101(D21), 26577-26588, 10.1029/96JD02133, 1996.

F17 Mlynczak, M. G., Energetics of the middle atmosphere: Theory and observation requirements, *Advances in Space Research*, Volume 17, Issue 11, 1996, Pages 117-126

1995

F16 Mlynczak, M. G., D. J. Nesbitt, The Einstein coefficient for spontaneous emission of the O₂(¹ Δ) state, *Geophys. Res. Lett.*, 22(11), 1381-1384, 10.1029/95GL01320, 1995.

F15 Mlynczak, M. G., D. S. Olander, On the utility of the molecular oxygen dayglow emissions as proxies for middle atmospheric ozone, *Geophys. Res. Lett.*, 22(11), 1377-1380, 10.1029/95GL01321, 1995.

- F14 Meriwether, J. W., M. G. Mlynczak, Is chemical heating a major cause of the mesosphere inversion layer?, *J. Geophys. Res.*, 100(D1), 1379-1388, 10.1029/94JD01736, 1995.

1994

- F13 Edwards, D. P., Manuel López-Puertas and Martin G. Mlynczak, Non-local thermodynamic equilibrium limb radiance from O₃ and CO₂ in the 9–11 μm spectral region, *Journal of Quantitative Spectroscopy and Radiative Transfer*, Volume 52, Issues 3-4, September-October 1994, Pages 389-407
- F12 Mlynczak, M. G., D. S. Olander, M. Lopez-Puertas, Rapid computation of spectrally integrated non-local thermodynamic equilibrium limb emission, *J. Geophys. Res.*, 99(D12), 25761-25772, 10.1029/94JD02397, 1994.

1993

- F11 Mlynczak, M. G., An evaluation of the rate of absorption of solar radiation in the O₂(³Σ→¹Σ) transition, *Geophys. Res. Lett.*, 20(14), 1439-1442, 10.1029/93GL01457, 1993.
- F10 Mlynczak, M. G., S. Solomon, A detailed evaluation of the heating efficiency in the middle atmosphere, *J. Geophys. Res.*, 98(D6), 10517-10541, 10.1029/93JD00315, 1993.
- F9 Mlynczak, M. G., S. Solomon, D. S. Zaras, An updated model for O₂(¹Δ) concentrations in the mesosphere and lower thermosphere and implications for remote sensing of ozone at 1.27 um, *J. Geophys. Res.*, 98(D10), 18639-18648, 10.1029/93JD01478, 1993.

1991

- F8 Mlynczak, M. G., and S. Roland Drayson, Rapid computation of the radiative absorption rate in the v₃ mode of mesospheric and lower thermospheric ozone, *Journal of Quantitative Spectroscopy and Radiative Transfer*, Volume 46, Issue 5, November 1991, Pages 463-471
- F7 Mlynczak, M. G., S. Solomon, Middle atmosphere heating by exothermic chemical reactions involving odd-hydrogen species, *Geophys. Res. Lett.*, 18(1), 37-40, 10.1029/90GL02672, 1991.
- F6 Mlynczak, M. G., S. Solomon, Reply, *Geophys. Res. Lett.*, 18(9), 1793-1794, 10.1029/91GL02139, 1991.
- F5 Mlynczak, M. G., S. Solomon, On the efficiency of solar heating in the middle atmosphere, *Geophys. Res. Lett.*, 18(7), 1201-1204, 10.1029/91GL01525, 1991.
- F4 Mlynczak, M. G., Nonlocal thermodynamic equilibrium processes in ozone: Implications for the energy budget of the mesosphere and lower thermosphere, *J. Geophys. Res.*, 96(D9), 17217-17228, 10.1029/91JD01833, 1991.

1990

- F3 Mlynczak, M. G., S. R. Drayson, Calculation of infrared limb emission by ozone in the terrestrial middle atmosphere. 1. Source functions, *J. Geophys. Res.*, 95(D10), 16497-16511, 10.1029/90JD01306, 1990.
- F2 Mlynczak, M. G., S. R. Drayson, Calculation of infrared limb emission by ozone in the terrestrial middle atmosphere. 2. Emission calculations, *J. Geophys. Res.*, 95(D10), 16513-16521, 10.1029/90JD01307, 1990.

1981

- F1 Barrett, J. L., M. G. Mlynczak, and J. J. Leventhal, Charge transfer excitation in low energy collisions between rare gas ions and cadmium atoms, *J. Chem. Phys.*, 75, 2705-2710, 1981.